1015710**81** 1011 1 06 MAR 2005

SEQUENCE LISTING

<110>	ENDO, Yaeta SAWASAKI, Tatsuya
<120>	Novel High-Throughput Screening Method of Drug for Bioactive Protein
<130>	3190-091
<140> <141>	US Unassigned 2006-03-06
<150> <151>	PCT/JP2004/013071 2004-09-08
<150> <151>	JP 2003-316081 2003-09-08
<160>	32
<170>	PatentIn version 3.1
<210> <211> <212> <213>	1 4608 DNA Human coronavirus
<400> atttag	1 gtga cactatagaa ctcacctatc tccccaacac ctaataacat tcaatcactc 60
tttcca	ctaa ccacctatct acatcaccaa gatatcacta gttctcgaga tgagcggctt 120
ccgcaa	gatg geetteecca geggeaaggt egagggetge atggtgeagg teacetgegg 180
caccac	tace etgaaeggee tgtggetgga tgaeaeegte tactgeeeee geeaegtgat 240
ctgcac	cgcc gaggacatgc tgaaccccaa ctacgaggac ctgctcatcc gcaagagcaa 300
ccactc	cttc ctggtgcagg ccggcaacgt ccagctgcgc gtgatcggcc acagcatgca 360
gaactg	cctg ctccgcctga aggtggacac cagcaacccc aagaccccca agtacaagtt 420
cgtgcg	cate cageceggee agacetteag egtgetggee tgetacaaeg geageeeeag 480
cggcgt	gtac cagtgcgcca tgcgccccaa ccacaccatc aagggcagct tcctgaacgg 540
gagctg	cggc agcgtgggct tcaacatcga ctacgactgc gtaagcttct gctacatgca 600
ccacat	ggag ctgcccaccg gcgtgcacgc cggcaccgac ctggagggca agttctacgg 660
cccctt	cgtg gaccgccaga ccgcccaggc cgccggcacc gacaccacca tcaccctgaa 720
cgtgct	ggcc tggctgtacg ccgccgtgat caacggcgac cgctggttcc tgaaccgctt 780
caccac	tace etgaacgaet teaacetggt ggeeatgaag tacaactaeg ageeeetgae 840
ccagga	ccac gtggacatec tgggeeecet gagegeeeag aceggeateg eegteetgga 900
catgtg	cgcc gccctgaagg agctgctcca gaacggcatg aacggccgca ccatcctggg 960
cagcac	catc ctggaggacg agttcacccc cttcgacgtc gtgcgccagt gcagcggcgt 1020
gacctt	ccag taaggatcca tatatagggc ccgggttata attacctcag gtcgacgtcc 1080

1140 catqqttttq tataqaattt acqqctaqcq ccqqatqcqa cqccqqtcqc qtcttatccq gccttcctat atcaggctgt gtttaagacg ccgccgcttc gcccaaatcc ttatgccggt 1200 togacggotg gacaaaatac tgtttatott cocagogoag goaggttaat gtaccaccoo 1260 agcagcagec ggtatecage gegtatatac etteeggegt acetttgeec tecagegatg 1320 cccagtgacc aaaggcgatg ctgtattctt cagcgacagg gccaggaatc gcaaaccacg 1380 gtttcagtgg ggcaggggcc tcttccggcg attcttacta gctagtatgc ataggtgctg 1440 1500 aaatataaag tttgtgtttc taaaacacac gtggtacgta cgataacgta cagtgttttt ccctccactt aaatcgaagg gtagtgtctt ggagcgcgcg gagtaaacat atatggttca 1560 tatatgtccg taggcacgta aaaaaagcga gggattcgaa ttcccccgga acccccggtt 1620 1680 ggcgtaatca tggtcatage tgttteetgt gtgaaattgt tateegetea caatteeaca 1740 caacatacqa qccqqaaqca taaaqtqtaa agcctggggt gcctaatgag tgagctaact 1800 cacattaatt gcgttgcgct cactgcccgc tttccagtcg ggaaacctgt cgtgccagct 1860 1920 gcattaatga atcggccaac gcgcggggag aggcggtttg cgtattgggc gctcttccgc ttectegete actgaetege tgegeteggt egtteggetg eggegagegg tateagetea 1980 ctcaaaggcg gtaatacggt tatccacaga atcaggggat aacgcaggaa agaacatgtg 2040 2100 agcaaaaggc cagcaaaagg ccaggaaccg taaaaaggcc gcgttgctgg cgtttttcca 2160 taggeteege eeecetgaeg ageateacaa aaategaege teaagteaga ggtggegaaa cccgacagga ctataaagat accaggcgtt tccccctgga agctccctcg tgcgctctcc 2220 tgttccgacc ctgccgctta ccggatacct gtccgccttt ctcccttcgg gaagcgtggc 2280 gctttctcat agctcacgct gtaggtatct cagttcggtg taggtcgttc gctccaagct 2340 2400 gggctgtgtg cacgaaccc ccgttcagcc cgaccgctgc gccttatccg gtaactatcg 2460 tottgagtoc aacceggtaa gacacgactt ategecactg geageageea etggtaacag gattagcaga gcgaggtatg taggcggtgc tacagagttc ttgaagtggt ggcctaacta 2520 2580 cggctacact agaaggacag tatttggtat ctgcgctctg ctgaagccag ttaccttcgg 2640 aaaaagagtt ggtagctctt gatccggcaa acaaaccacc gctggtagcg gtggtttttt tgtttgcaag cagcagatta cgcgcagaaa aaaaggatct caagaagatc ctttgatctt 2700 ttctacqqqq tctgacqctc agtggaacqa aaactcacqt taagggattt tggtcatgag 2760 attatcaaaa aggatcttca cctagatcct tttaaattaa aaatgaagtt ttaaatcaat 2820 ctaaagtata tatgagtaaa cttggtctga cagttaccaa tgcttaatca gtgaggcacc 2880 tatctcagcq atctgtctat ttcgttcatc catagttgcc tgactccccg tcgtgtagat 2940

t	aactacgata	cgggagggct	taccatctgg	ccccagtgct	gcaatgatac	cgcgagaccc	3000
	acgctcaccg	gctccagatt	tatcagcaat	aaaccagcca	gccggaaggg	ccgagcgcag	3060
	aagtggtcct	gcaactttat	ccgcctccat	ccagtctatt	aattgttgcc	gggaagctag	3120
	agtaagtagt	tcgccagtta	atagtttgcg	caacgttgtt	gccattgcta	caggcatcgt	3180
	ggtgtcacgc	tcgtcgtttg	gtatggcttc	attcagctcc	ggttcccaac	gatcaaggcg	3240
	agttacatga	tccccatgt	tgtgcaaaaa	agcggttagc	tccttcggtc	ctccgatcgt	3300
	tgtcagaagt	aagttggccg	cagtgttatc	actcatggtt	atggcagcac	tgcataattc	3360
	tcttactgtc	atgccatccg	taagatgctt	ttctgtgact	ggtgagtact	caaccaagtc	3420
	attctgagaa	tagtgtatgc	ggcgaccgag	ttgctcttgc	ccggcgtcaa	tacgggataa	3480
	taccgcgcca	catagcagaa	ctttaaaagt	gctcatcatt	ggaaaacgtt	cttcggggcg	3540
	aaaactctca	aggatcttac	cgctgttgag	atccagttcg	atgtaaccca	ctcgtgcacc	3600
	caactgatct	tcagcatctt	ttactttcac	cagcgtttct	gggtgagcaa	aaacaggaag	3660
	gcaaaatgcc	gcaaaaaagg	gaataagggc	gacacggaaa	tgttgaatac	tcatactctt	3720
	cctttttcaa	tattattgaa	gcatttatca	gggttattgt	ctcatgagcg	gatacatatt	3780
	tgaatgtatt	tagaaaaata	aacaaatagg	ggttccgcgc	acatttcccc	gaaaagtgcc	3840
	acctgacgtc	taagaaacca	ttattatcat	gacattaacc	tataaaaata	ggcgtatcac	3900
	gaggcccttt	cgtctcgcgc	gtttcggtga	tgacggtgaa	aacctctgac	acatgcagct	3960
	cccggagacg	gtcacagctt	gtctgtaagc	ggatgccggg	agcagacaag	cccgtcaggg	4020
	cgcgtcagcg	ggtgttggcg	ggtgtcgggg	ctggcttaac	tatgcggcat	cagagcagat	4080
	tgtactgaga	gtgcaccata	tcgacgctct	cccttatgcg	actcctgcat	taggaagcag	4140
	cccagtagta	ggttgaggcc	gttgagcacc	gccgccgcaa	ggaatggtgc	atgcaaggag	4200
	atggcgccca	acagtccccc	ggccacgggg	cctgccacca	tacccacgcc	gaaacaagcg	4260
	ctcatgagcc	cgaagtggcg	agcccgatct	tccccatcgg	tgatgtcggc	gatataggcg	4320
	ccagcaaccg	cacctgtggc	gccggtgatg	ccggccacga	tgcgtccggc	gtagaggatc	4380
	tggctagcga	tgaccctgct	gattggttcg	ctgaccattt	ccggggtgcg	gaacggcgtt	4440
	accagaaact	cagaaggttc	gtccaaccaa	accgactctg	acggcagttt	acgagagaga	4500
	tgatagggtc	tgcttcagta	agccagatgc	tacacaatta	ggcttgtaca	tattgtcgtt	4560
	agaacgcggc	tacaattaat	acataacctt	atgtatcata	cacatacg		4608

<210> 2 <211> 6389 <212> DNA <213> Artificial

<220>

<400> 2 atttaggtga cactatagaa ctcacctatc tccccaacac ctaataacat tcaatcactc 60 120 tttccactaa ccacctatct acatcaccaa gatatcactc gagaatggtg agcaagggcg aggagetgtt caccggggtg gtgcccatcc tggtcgaget ggacggcgac gtgaacggcc 180 acaagttcag cgtgtccggc gagggcgagg gcgatgccac ctacggcaag ctgaccctga 240 300 agttcatctg caccaccggc aagctgcccg tgccctggcc caccctcgtg accaccttca cctacggcgt gcagtgcttc agccgctacc ccgaccacat gaagcagcac gacttcttca 360 agtecgecat geogaagge taegteeagg agegeaceat ettetteaag gaegaeggea 420 480 actacaagac ccgcgccgag gtgaagttcg agggcgacac cctggtgaac cgcatcgagc 540 tgaagggcat cgacttcaag gaggacggca acatcctggg gcacaagctg gagtacaact 600 acaacagcca caacgtctat atcatggccg acaagcagaa gaacggcatc aaggtgaact 660 tcaagatccg ccacaacatc gaggacggca gcgtgcagct cgccgaccac taccagcaga acacccccat cggcgacggc cccgtgctgc tgcccgacaa ccactacctg agcacccagt 720 780 ccgccctgag caaagacccc aacgagaagc gcgatcacat ggtcctgctg gagttcgtga ccgccgccgg gatcactcac ggcatggacg agctgtacaa gccccccag accagcatca 840 900 cctctgccgt gctgcagagc ggcttccgca agatggcctt ccccagcggc aaggtgatgt 960 tacgtcctgt agaaacccca acccgtgaaa tcaaaaaaact cgacggcctg tgggcattca gtctggatcg cgaaaactgt ggaattgatc agcgttggtg ggaaagcgcg ttacaagaaa 1020 gccgggcaat tgctgtgcca ggcagtttta acgatcagtt cgccgatgca gatattcgta 1080 attatgcggg caacgtctgg tatcagcgcg aagtctttat accgaaaggt tgggcaggcc 1140 agcgtatcgt gctgcgtttc gatgcggtca ctcattacgg caaagtgtgg gtcaataatc 1200 1260 aggaagtgat ggagcatcag ggcggctata cgccatttga agccgatgtc acgccgtatg ttattgccgg gaaaagtgta cgtatcaccg tttgtgtgaa caacgaactg aactggcaga 1320 ctatcccgcc gggaatggtg attaccgacg aaaacggcaa gaaaaagcag tcttacttcc 1380 atgatttett taactatgee ggaateeate geagegtaat getetaeace aegeegaaca 1440 cctgggtgga cgatatcacc gtggtgacgc atgtcgcgca agactgtaac cacgcgtctg 1500 1560 ttgactggca ggtggtggcc aatggtgatg tcagcgttga actgcgtgat gcggatcaac 1620 aggtggttgc aactggacaa ggcactagcg ggactttgca agtggtgaat ccgcacctct ggcaaccggg tgaaggttat ctctatgaac tgtgcgtcac agccaaaagc cagacagagt 1680 gtgatatcta cccgcttcgc gtcggcatcc ggtcagtggc agtgaagggc gaacagttcc 1740 tgattaacca caaaccgttc tactttactg gctttggtcg tcatgaagat gcggacttgc 1800

gtggcaaagg attcgataac gtgctgatgg tgcacgacca cgcattaatg gactggattg 1860 gggccaactc ctaccgtacc tcgcattacc cttacgctga agagatgctc gactgggcag 1920 atgaacatgg catcgtggtg attgatgaaa ctgctgctgt cggctttaac ctctctttag 1980 qcattqqttt cqaaqcqgc aacaagccga aagaactgta cagcgaagag gcagtcaacg 2040 gggaaactca gcaagcgcac ttacaggcga ttaaagagct gatagcgcgt gacaaaaacc 2100 2160 acccaagcgt ggtgatgtgg agtattgcca acgaaccgga tacccgtccg caaggtgcac gggaatattt cgcgccactg gcggaagcaa cgcgtaaact cgacccgacg cgtccgatca 2220 cctgcgtcaa tgtaatgttc tgcgacgctc acaccgatac catcagcgat ctctttgatg 2280 tgctgtgcct gaaccgttat tacggatggt atgtccaaag cggcgatttg gaaacggcag 2340 agaaggtact ggaaaaagaa cttctggcct ggcaggagaa actgcatcag ccgattatca 2400 tcaccgaata cggcgtggat acgttagccg ggctgcactc aatgtacacc gacatgtgga 2460 gtgaagagta tcagtgtgca tggctggata tgtatcaccg cgtctttgat cgcgtcagcg 2520 2580 ccgtcgtcgg tgaacaggta tggaatttcg ccgattttgc gacctcgcaa ggcatattgc 2640 gcgttqqcqq taacaagaaa gggatcttca ctcgcgaccg caaaccgaag tcggcggctt 2700 ttctgctgca aaaacgctgg actggcatga acttcggtga aaaaccgcag cagggaggca 2760 aacaatgaat caacaactct cctggcgcac catcgtcggc tacagcctcg ggaattgcta ccgagctcgg tacctgtccg cggtcgcgac gtacgcgggc ggccgccata aattggatcc 2820 atatataggg cccgggttat aattacctca ggtcgacgtc ccatggtttt gtatagaatt 2880 tacggctagc gccggatgcg acgccggtcg cgtcttatcc ggccttccta tatcaggctg 2940 tgtttaaqac gccgccgctt cgcccaaatc cttatgccgg ttcgacggct ggacaaaata 3000 ctgtttatct tcccagcgca ggcaggttaa tgtaccaccc cagcagcagc cggtatccag 3060 cgcgtatata ccttccggcg tacctttgcc ctccagcgat gcccagtgac caaaggcgat 3120 3180 gctgtattct tcagcgacag ggccaggaat cgcaaaccac ggtttcagtg gggcaggggc ctcttccggc gattcttact agctagtatg cataggtgct gaaatataaa gtttgtgttt 3240 3300 ctaaaacaca cqtqgtacqt acqataacqt acagtqtttt tccctccact taaatcgaag 3360 ggtagtgtct tggagcgcgc ggagtaaaca tatatggttc atatatgtcc gtaggcacgt aaaaaaagcg agggattcga attcccccgg aacccccggt tggggcccac gcctcgatcg 3420 aqcaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaqct tggcgtaatc atggtcataq 3480 ctgtttcctg tgtgaaattg ttatccgctc acaattccac acaacatacg agccggaagc 3540 3600 ataaagtgta aagcctgggg tgcctaatga gtgagctaac tcacattaat tgcgttgcgc tcactgcccg ctttccagtc gggaaacctg tcgtgccagc tgcattaatg aatcggccaa 3660

3720 egegegggga gaggeggttt gegtattggg egetetteeg etteeteget eactgacteg 3780 ctgcgctcgg tcgttcggct gcggcgagcg gtatcagctc actcaaaggc ggtaatacgg 3840 ttatccacag aatcagggga taacgcagga aagaacatgt gagcaaaagg ccagcaaaag 3900 qccaqqaacc qtaaaaaqqc cqcqttqctq qcqtttttcc ataqqctccq ccccctqac gaqcatcaca aaaatcgacg ctcaagtcag aggtggcgaa acccgacagg actataaaga 3960 4020 taccaggogt ttccccctgg aagctccctc gtgcgctctc ctgttccgac cctgccgctt accqqatacc tqtccgcctt tctcccttcg ggaagcgtgg cgctttctca tagctcacgc 4080 tqtagqtatc tcagttcggt gtaggtcgtt cgctccaagc tgggctgtgt gcacgaaccc 4140 cccgttcagc ccgaccgctg cgccttatcc ggtaactatc gtcttgagtc caacccggta 4200 4260 agacacgact tatcgccact ggcagcagcc actggtaaca ggattagcag agcgaggtat 4320 gtaggcggtg ctacagagtt cttgaagtgg tggcctaact acggctacac tagaaggaca 4380 gtatttggta tctgcgctct gctgaagcca gttaccttcg gaaaaagagt tggtagctct tgatccggca aacaaaccac cgctggtagc ggtggttttt ttgtttgcaa gcagcagatt 4440 acgcgcagaa aaaaaggatc tcaagaagat cctttgatct tttctacggg gtctgacgct 4500 caqtqqaacq aaaactcacq ttaagggatt ttggtcatga gattatcaaa aaggatcttc 4560 acctagatcc ttttaaatta aaaatgaagt tttaaatcaa tctaaagtat atatgagtaa 4620 4680 acttgqtctq acagttacca atgcttaatc agtgaggcac ctatctcagc gatctgtcta tttcgttcat ccatagttgc ctgactcccc gtcgtgtaga taactacgat acgggagggc 4740 4800 ttaccatctg gccccagtgc tgcaatgata ccgcgagacc cacgctcacc ggctccagat ttatcaqcaa taaaccaqcc aqccqqaaqq gccqaqcqca gaaqtggtcc tgcaacttta 4860 4920 teegeeteea teeagtetat taattgttge egggaageta gagtaagtag ttegeeagtt aatagtttgc gcaacgttgt tgccattgct acaggcatcg tggtgtcacg ctcgtcgttt 4980 qqtatqqctt cattcagctc cggttcccaa cgatcaaggc gagttacatg atcccccatg 5040 5100 ttgtgcaaaa aagcggttag ctccttcggt cctccgatcg ttgtcagaag taagttggcc gcagtgttat cactcatggt tatggcagca ctgcataatt ctcttactgt catgccatcc 5160 gtaagatgct tttctgtgac tggtgagtac tcaaccaagt cattctgaga atagtgtatg 5220 5280 cggcgaccga gttgctcttg cccggcgtca atacgggata ataccgcgcc acatagcaga 5340 actttaaaag tgctcatcat tggaaaacgt tcttcggggc gaaaactctc aaggatctta 5400 ccgctgttga gatccagttc gatgtaaccc actcgtgcac ccaactgatc ttcagcatct 5460 tttactttca ccagcgtttc tgggtgagca aaaacaggaa ggcaaaatgc cgcaaaaaag ggaataaggg cgacacggaa atgttgaata ctcatactct tcctttttca atattattga 5520 agcatttatc agggttattg tctcatgagc ggatacatat ttgaatgtat ttagaaaaat 5580 aaacaaatag gggttccgcg cacatttccc cgaaaagtgc cacctqacqt ctaagaaacc 5640 attattatca tgacattaac ctataaaaat aggcgtatca cgaggccctt tcgtctcgcg 5700 5760 cgtttcggtg atgacggtga aaacctctga cacatgcagc tcccggagac ggtcacagct tgtctgtaag cggatgccgg gagcagacaa gcccgtcagg gcgcgtcagc gggtgttggc 5820 gggtgtcggg gctggcttaa ctatgcggca tcagagcaga ttgtactgag agtgcaccat 5880 atcgacgctc tecettatgc gacteetgca ttaggaagca geccagtagt aggttgagge 5940 cqttqaqcac cqccqccqca aggaatggtg catqcaagga gatqqcqccc aacaqtcccc 6000 6060 cggccacggg gcctgccacc atacccacgc cgaaacaagc gctcatgagc ccgaagtggc gagecegate tteeceateg gtgatgtegg egatatagge gecageaace geacetgtgg 6120 cqccqqtqat qccqqccacg atgcqtccqg cqtagaggat ctggctagcg atgaccttgc 6180 tgattggttc gctgaccatt tccggggtgc ggaacggcgt taccagaaac tcagaaggtt 6240 6300 cgtccaacca aaccgactct gacggcagtt tacgagagag atgatagggt ctgcttcagt 6360 aagccagatg ctacacaatt aggcttgtac atattgtcgt tagaacgcgg ctacaattaa 6389 tacataacct tatgtatcat acacatacg

<210> 3

<211> 4608

<212> DNA

<213> Artificial

<220>

<223> Designed DNA(C145A) based on protease originated from human coronavirus

<400> 3 atttaggtga cactatagaa ctcacctatc tccccaacac ctaataacat tcaatcactc 60 tttccactaa ccacctatct acatcaccaa gatatcacta gttctcgaga tgagcggctt 120 ccgcaagatg gccttcccca gcggcaaggt cgagggctgc atggtgcagg tcacctgcgg 180 caccactacc ctgaacggcc tgtggctgga tgacaccgtc tactgccccc gccacgtgat 240 ctgcaccgcc gaggacatgc tgaaccccaa ctacgaggac ctgctcatcc gcaagagcaa 300 ccactccttc ctggtgcagg ccggcaacgt ccagctgcgc gtgatcggcc acagcatgca 360 gaactgcctg ctccgcctga aggtggacac cagcaacccc aagaccccca agtacaagtt 420 cgtgcgcatc cagcccggcc agaccttcag cgtgctggcc tgctacaacg gcagccccag 480 540 cgqcqtqtac caqtgcgcca tgcgccccaa ccacaccatc aagggcagct tcctgaacgg gagegeegge agegtggget teaacatega ttaegaetge gtaagettet getacatgea 600 ccacatggag ctgcccaccg gcgtgcacgc cggcaccgac ctggagggca agttctacgg 660 720 cccttcqtq qaccqccaqa ccqcccaqqc cqccqqcacc gacaccacta tcaccctgaa

780 cgtgctggcc tggctgtacg ccgccgtgat caacggcgac cgctggttcc tgaaccgctt 840 caccactacc ctgaacgact tcaacctggt ggccatgaag tacaactacg agcccctgac 900 ccaggaccac gtggacatcc tgggccccct gagcgcccag accggcatcg ccgtcctgga catgtgcgcc gccctgaagg agctgctcca gaacggcatg aacggccgca ccatcctggg 960 1020 cagcaccatc ctggaggacg agttcacccc cttcgacgtc gtgcgccagt gcagcggcgt 1080 gaccttccag taaggatcca tatatagggc ccgggttata attacctcag gtcgacgtcc catggttttg tatagaattt acggctagcg ccggatgcga cgccggtcgc gtcttatccg 1140 qccttcctat atcaggctgt gtttaagacg ccgccgcttc gcccaaatcc ttatgccggt 1200 1260 togacggotg gacaaaatac tgtttatott cocagogcag gcaggttaat gtaccacccc agcagcagcc ggtatccagc gcgtatatac cttccggcgt acctttgccc tccagcgatg 1320 cccaqtgacc aaaggcgatg ctgtattctt cagcgacagg gccaggaatc gcaaaccacg 1380 gtttcagtgg ggcaggggcc tcttccggcg attcttacta gctagtatgc ataggtgctg 1440 aaatataaag tttgtgtttc taaaacacac gtggtacgta cgataacgta cagtgttttt 1500 1560 ccctccactt aaatcgaagg gtagtgtctt ggagcgcgcg gagtaaacat atatggttca tatatgtccg taggcacgta aaaaaagcga gggattcgaa ttcccccgga acccccggtt 1620 ggggcccacg cctcgatcga gcaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaagctt 1680 1740 ggcgtaatca tggtcatagc tgtttcctgt gtgaaattgt tatccgctca caattccaca 1800 caacatacga gccggaagca taaagtgtaa agcctggggt gcctaatgag tgagctaact 1860 cacattaatt gcgttgcgct cactgcccgc tttccagtcg ggaaacctgt cgtgccagct 1920 gcattaatga atcggccaac gcgcggggag aggcggtttg cgtattgggc gctcttccgc 1980 ttcctcgctc actgactcgc tgcgctcggt cgttcggctg cggcgagcgg tatcagctca 2040 ctcaaaggcg gtaatacggt tatccacaga atcaggggat aacgcaggaa agaacatgtg agcaaaaggc cagcaaaagg ccaggaaccg taaaaaggcc gcgttgctgg cgtttttcca 2100 2160 taggeteege eeceetgaeg ageateacaa aaategaege teaagteaga ggtggegaaa 2220 cccgacagga ctataaagat accaggcgtt tccccctgga agctccctcg tgcgctctcc tqttccqacc ctqccqctta ccgqatacct gtccgccttt ctcccttcgg gaagcgtggc 2280 2340 gctttctcat agctcacgct gtaggtatct cagttcggtg taggtcgttc gctccaagct 2400 gggctgtgtg cacgaacccc ccgttcagcc cgaccgctgc gccttatccg gtaactatcg 2460 tcttgagtcc aacccggtaa gacacgactt atcgccactg gcagcagcca ctggtaacag 2520 gattagcaga gcgaggtatg taggcggtgc tacagagttc ttgaagtggt ggcctaacta cggctacact agaaggacag tatttggtat ctgcgctctg ctgaagccag ttaccttcgg 2580 aaaaaqaqtt qqtaqctctt gatccggcaa acaaaccacc gctggtagcg gtggtttttt 2640

2700 tgtttgcaag cagcagatta cgcgcagaaa aaaaggatct caagaagatc ctttgatctt 2760 ttctacgggg tctgacgctc agtggaacga aaactcacgt taagggattt tggtcatgag attatcaaaa aggatcttca cctagatcct tttaaattaa aaatgaagtt ttaaatcaat 2820 2880 ctaaaqtata tatqaqtaaa cttggtctga cagttaccaa tgcttaatca gtgaggcacc 2940 tatctcagcg atctgtctat ttcgttcatc catagttgcc tgactccccg tcgtgtagat aactacgata cgggagggct taccatctgg ccccagtgct gcaatgatac cgcgagaccc 3000 3060 acgctcaccg gctccagatt tatcagcaat aaaccagcca gccggaaggg ccgagcgcag 3120 aagtggtcct gcaactttat ccgcctccat ccagtctatt aattgttgcc gggaagctag 3180 agtaagtagt tegecagtta atagtttgeg caaegttgtt gecattgeta caggeategt qqtqtcacqc tcqtcqtttq qtatqqcttc attcagctcc ggttcccaac gatcaaggcg 3240 3300 aqttacatqa tcccccatqt tgtgcaaaaa agcggttagc tccttcggtc ctccgatcgt 3360 tgtcagaagt aagttggccg cagtgttatc actcatggtt atggcagcac tgcataattc 3420 tcttactgtc atgccatccg taagatgctt ttctgtgact ggtgagtact caaccaagtc 3480 attctqaqaa tagtgtatgc ggcgaccgag ttgctcttgc ccggcgtcaa tacgggataa taccgcgcca catagcagaa ctttaaaagt gctcatcatt ggaaaacgtt cttcggggcg 3540 aaaactctca aggatcttac cgctgttgag atccagttcg atgtaaccca ctcgtgcacc 3600 3660 caactgatct tcagcatctt ttactttcac cagcgtttct gggtgagcaa aaacaggaag 3720 gcaaaatgcc gcaaaaaagg gaataagggc gacacggaaa tgttgaatac tcatactctt 3780 cctttttcaa tattattgaa gcatttatca gggttattgt ctcatgagcg gatacatatt 3840 tqaatqtatt taqaaaaata aacaaatagg ggttccgcgc acatttcccc gaaaagtgcc acctgacgtc taagaaacca ttattatcat gacattaacc tataaaaata ggcgtatcac 3900 3960 gaggecettt egtetegege gttteggtga tgaeggtgaa aacetetgae acatgeaget cccggagacg gtcacagctt gtctgtaagc ggatgccggg agcagacaag cccgtcaggg 4020 4080 cgcgtcagcg ggtgttggcg ggtgtcgggg ctggcttaac tatgcggcat cagagcagat 4140 tgtactgaga gtgcaccata tcgacgctct cccttatgcg actcctgcat taggaagcag 4200 cccagtagta ggttgaggcc gttgagcacc gccgccgcaa ggaatggtgc atgcaaggag 4260 atggcgccca acagtccccc ggccacgggg cctgccacca tacccacgcc gaaacaagcg ctcatgagcc cgaagtggcg agcccgatct tccccatcgg tgatgtcggc gatataggcg 4320 ccaqcaaccq cacctgtggc gccggtgatg ccggccacga tgcgtccggc gtagaggatc 4380 tggctagcga tgaccctgct gattggttcg ctgaccattt ccggggtgcg gaacggcgtt 4440 4500 accagaaact cagaaggttc gtccaaccaa accgactctg acggcagttt acgagagaga

tgatagggtc tgcttcagta	agccagatgc	tacacaatta	ggcttgtaca	tattgtcgtt	4560
agaacgcggc tacaattaat	acataacctt	atgtatcata	cacatacg		4608
<210> 4 <211> 5298 <212> DNA <213> Artificial					
<220> <223> pEU-GST-RS-SARS	S-3CL				
<400> 4 atttaggtga cactatagaa	ctcacctatc	tccccaacac	ctaataacat	tcaatcactc	60
tttccactaa ccacctatct	acatcaccaa	gatatcactc	gagatggaat	cccctatact	120
aggttattgg aaaattaagg	gccttgtgca	acccactcga	cttcttttgg	aatatcttga	180
agaaaaatat gaagagcatt	tgtatgagcg	cgatgaaggt	gataaatggc	gaaacaaaaa	240
gtttgaattg ggtttggagt	ttcccaatct	tccttattat	attgatggtg	atgttaaatt	300
aacacagtct atggccatca	tacgttatat	agctgacaag	cacaacatgt	tgggtggttg	360
tccaaaagag cgtgcagaga	tttcaatgct	tgaaggagcg	gttttggata	ttagatacgg	420
tgtttcgaga attgcatata	gtaaagactt	tgaaactctc	aaagttgatt	ttcttagcaa	480
gctacctgaa atgctgaaaa	tgttcgaaga	tcgtttatgt	cataaaacat	atttaaatgg	540
tgatcatgta acccatcctg	acttcatgtt	gtatgacgct	cttgatgttg	ttttatacat	600
ggacccaatg tgcctggatg	cgttcccaaa	attagtttgt	tttaaaaaac	gtattgaagc	660
tatcccacaa attgataagt	acttgaaatc	cagcaagtat	atagcatggc	ctttgcaggg	720
ctggcaagcc acgtttggtg	gtggcgacca	tcctccaaaa	tcggacccac	cgcagaccag	780
catcacctct gccgtgctgc	agageggett	ccgcaagatg	gccttcccca	gcggcaaggt	840
cgagggctgc atggtgcagg	tcacctgcgg	caccactacc	ctgaacggcc	tgtggctgga	900
tgacaccgtc tactgccccc	gccacgtgat	ctgcaccgcc	gaggacatgc	tgaaccccaa	960
ctacgaggac ctgctcatcc	gcaagagcaa	ccactccttc	ctggtgcagg	ccggcaacgt	1020
ccagctgcgc gtgatcggcc	acagcatgca	gaactgcctg	ctccgcctga	aggtggacac	1080
cagcaacccc aagaccccca	agtacaagtt	cgtgcgcatc	cagcccggcc	agaccttcag	1140
cgtgctggcc tgctacaacg	gcagccccag	cggcgtgtac	cagtgcgcca	tgcgccccaa	1200
ccacaccatc aagggcagct	tcctgaacgg	gagctgcggc	agcgtgggct	tcaacatcga	1260
ctacgactgc gtaagcttct	gctacatgca	ccacatggag	ctgcccaccg	gcgtgcacgc	1320
cggcaccgac ctggagggca	agttctacgg	ccccttcgtg	gaccgccaga	ccgcccaggc	1380
cgccggcacc gacaccacta	tcaccctgaa	cgtgctggcc	tggctgtacg	ccgccgtgat	1440
caacggcgac cgctggttcc	tgaaccgctt	caccactacc	ctgaacgact	tcaacctggt	1500

ggccatgaag tacaactacg agcccctgac ccaggaccac gtggacatcc tgggccccct 1560 1620 gagogoccag acoggoatog cogtoctgga catgtgogoc gocotgaagg agotgotoca 1680 gaacggcatg aacggccgca ccatcctggg cagcaccatc ctggaggacg agttcacccc cttcgacgtc gtgcgccagt gcagcggcgt gaccttccag taaggatcca tatatagggc 1740 ccgggttata attacctcag gtcgacgtcc catggttttg tatagaattt acggctagcg 1800 ccggatgcga cgccggtcgc gtcttatccg gccttcctat atcaggctgt gtttaagacg 1860 cogcogcttc gcccaaatcc ttatgccggt tcgacggctg gacaaaatac tgtttatctt 1920 1980 cccagcgcag gcaggttaat gtaccacccc agcagcagcc ggtatccagc gcgtatatac 2040 cttccggcgt acctttgccc tccagcgatg cccagtgacc aaaggcgatg ctgtattctt cagcgacagg gccaggaatc gcaaaccacg gtttcagtgg ggcaggggcc tcttccggcg 2100 2160 attettacta getagtatge ataggtgetg aaatataaag tttgtgttte taaaacacae 2220 qtqqtacqta cqataacqta cagtqttttt ccctccactt aaatcqaagg gtagtqtctt 2280 ggagcgcgcg gagtaaacat atatggttca tatatgtccg taggcacgta aaaaaagcga gggattcgaa ttcccccgga acccccggtt ggggcccacg cctcgatcga gcaaaaaaaa 2340 aaaaaaaaa aaaaaaaaa aaaaaagctt ggcgtaatca tggtcatagc tgtttcctgt 2400 2460 gtgaaattgt tatccgctca caattccaca caacatacga gccggaagca taaagtgtaa agcctggggt gcctaatgag tgagctaact cacattaatt gcgttgcgct cactgcccgc 2520 2580 tttccagtcg ggaaacctgt cgtgccagct gcattaatga atcggccaac gcgcggggag 2640 aggeggtttg cgtattgggc gctcttccgc ttcctcgctc actgactcgc tgcgctcggt 2700 cgttcggctg cggcgagcgg tatcagctca ctcaaaggcg gtaatacggt tatccacaga 2760 atcaggggat aacgcaggaa agaacatgtg agcaaaaggc cagcaaaagg ccaggaaccg taaaaaggcc gcgttgctgg cgtttttcca taggctccgc ccccctgacg agcatcacaa 2820 2880 aaatcgacgc tcaagtcaga ggtggcgaaa cccgacagga ctataaagat accaggcgtt 2940 tececetgga ageteceteg tgegetetee tgtteegace etgeegetta eeggataeet 3000 gtccgccttt ctcccttcgg gaagcgtggc gctttctcat agctcacgct gtaggtatct 3060 cagttcggtg taggtcgttc gctccaagct gggctgtgtg cacgaacccc ccgttcagcc cgaccgctgc gccttatccg gtaactatcg tcttgagtcc aacccggtaa gacacgactt 3120 atcgccactg gcagcagcca ctggtaacag gattagcaga gcgaggtatg taggcggtgc 3180 3240 tacagagttc ttgaagtggt ggcctaacta cggctacact agaaggacag tatttggtat ctgcgctctg ctgaagccag ttaccttcgg aaaaagagtt ggtagctctt gatccggcaa 3300 acaaaccacc qctqqtaqcq qtqqtttttt tqtttqcaaq cagcaqatta cqcqcaqaaa 3360

3420 aaaaggatct caagaagatc ctttgatctt ttctacgggg tctgacgctc agtggaacga aaactcacqt taaqqqattt tqqtcatqaq attatcaaaa aggatcttca cctagatcct 3480 3540 tttaaattaa aaatgaagtt ttaaatcaat ctaaagtata tatgagtaaa cttggtctga 3600 cagttaccaa tgcttaatca gtgaggcacc tatctcagcg atctgtctat ttcgttcatc 3660 cataqttqcc tqactccccq tcgtgtagat aactacgata cgggagggct taccatctgg 3720 ccccagtgct gcaatgatac cgcgagaccc acgctcaccg gctccagatt tatcagcaat aaaccagcca gccggaaggg ccgagcgcag aagtggtcct gcaactttat ccgcctccat 3780 3840 ccagtctatt aattgttgcc gggaagctag agtaagtagt tcgccagtta atagtttgcg caacgttgtt gccattgcta caggcatcgt ggtgtcacgc tcgtcgtttg gtatggcttc 3900 attcagctcc ggttcccaac gatcaaggcg agttacatga tcccccatgt tgtgcaaaaa 3960 4020 ageggttage teetteggte etcegategt tgteagaagt aagttggeeg eagtgttate actcatggtt atggcagcac tgcataattc tcttactgtc atgccatccg taagatgctt 4080 ttctgtgact ggtgagtact caaccaagtc attctgagaa tagtgtatgc ggcgaccgag 4140 4200 ttgctcttgc ccggcgtcaa tacgggataa taccgcgcca catagcagaa ctttaaaagt 4260 gctcatcatt ggaaaacgtt cttcggggcg aaaactctca aggatcttac cgctgttgag 4320 atccagttcg atgtaaccca ctcgtgcacc caactgatct tcagcatctt ttactttcac 4380 cagcgtttct gggtgagcaa aaacaggaag gcaaaatgcc gcaaaaaaagg gaataagggc gacacqqaaa tgttgaatac tcatactctt cctttttcaa tattattgaa gcatttatca 4440 gggttattgt ctcatgagcg gatacatatt tgaatgtatt tagaaaaata aacaaatagg 4500 4560 ggttccgcgc acatttcccc gaaaagtgcc acctgacgtc taagaaacca ttattatcat gacattaacc tataaaaata ggcgtatcac gaggcccttt cgtctcgcgc gtttcggtga 4620 4680 tgacggtgaa aacctctgac acatgcagct cccggagacg gtcacagctt gtctgtaagc 4740 ggatgccggg agcagacaag cccgtcaggg cgcgtcagcg ggtgttggcg ggtgtcgggg 4800 ctggcttaac tatgcggcat cagagcagat tgtactgaga gtgcaccata tcgacgctct 4860 cccttatgcg actcctgcat taggaagcag cccagtagta ggttgaggcc gttgagcacc gccgccgcaa ggaatggtgc atgcaaggag atggcgccca acagtccccc ggccacgggg 4920 4980 cctgccacca tacccacgcc gaaacaagcg ctcatgagcc cgaagtggcg agcccgatct 5040 tececategg tgatgtegge gatataggeg ecageaaceg cacetgtgge geeggtgatg ccggccacga tgcgtccggc gtagaggatc tggctagcga tgaccctgct gattggttcg 5100 5160 ctgaccattt ccggggtgcg gaacggcgtt accagaaact cagaaggttc gtccaaccaa accgactctg acggcagttt acgagagaga tgatagggtc tgcttcagta agccagatgc 5220

tacacaatta ggcttgtaca tatt	gtcgtt agaacgcggc	tacaattaat	acataacctt	5280
atgtatcata cacatacg				5298
<210> 5 <211> 5353 <212> DNA <213> Artificial				
<220> <223> pEU-GFP-RS-SARS-3CL				
<400> 5 atttaggtga cactatagaa ctca	cctatc tccccaacac	ctaataacat	tcaatcactc	60
tttccactaa ccacctatct acat	caccaa gatatcactc	gagcatggtg	agcaagggcg	120
aggagctgtt caccggggtg gtgc	ccatcc tggtcgagct	ggacggcgac	gtgaacggcc	180
acaagttcag cgtgtccggc gagg	gcgagg gcgatgccac	ctacggcaag	ctgaccctga	240
agttcatctg caccaccggc aagc	tgcccg tgccctggcc	caccctcgtg	accaccttca	300
cctacggcgt gcagtgcttc agcc	gctacc ccgaccacat	gaagcagcac	gacttcttca	360
agtccgccat gcccgaaggc tacg	tccagg agcgcaccat	cttcttcaag	gacgacggca	420
actacaagac ccgcgccgag gtga	agttcg agggcgacac	cctggtgaac	cgcatcgagc	480
tgaagggcat cgacttcaag gagg	acggca acatcctggg	gcacaagctg	gagtacaact	540
acaacagcca caacgtctat atca	tggccg acaagcagaa	gaacggcatc	aaggtgaact	600
tcaagatccg ccacaacatc gagg	acggca gcgtgcagct	cgccgaccac	taccagcaga	660
acacccccat cggcgacggc cccg	tgctgc tgcccgacaa	ccactacctg	agcacccagt	720
ccgccctgag caaagacccc aacg	agaagc gcgatcacat	ggtcctgctg	gagttcgtga	780
ccgccgccgg gatcactcac ggca	tggacg agctgtacaa	gcccccccag	accagcatca	840
cctctgccgt gctgcagagc ggct	tccgca agatggcctt	ccccagcggc	aaggtcgagg	900
gctgcatggt gcaggtcacc tgcg	gcacca ctaccctgaa	cggcctgtgg	ctggatgaca	960
ccgtctactg cccccgccac gtga	itctgca ccgccgagga	catgctgaac	cccaactacg	1020
aggacctgct catccgcaag agca	accact ccttcctggt	gcaggccggc	aacgtccagc	1080
tgcgcgtgat cggccacagc atgc	agaact gcctgctccg	cctgaaggtg	gacaccagca	1140
accccaagac ccccaagtac aagt	tegtge geatecaged	cggccagacc	ttcagcgtgc	1200
tggcctgcta caacggcagc ccca	ageggeg tgtaceagtg	cgccatgcgc	cccaaccaca	1260
ccatcaaggg cagcttcctg aacg	gggaget geggeagegt	gggcttcaac	atcgactacg	1320
actgcgtaag cttctgctac atgc	caccaca tggagctgcc	caccggcgtg	cacgccggca	1380
ccgacctgga gggcaagttc tacg	gcccct tcgtggaccg	ccagaccgcc	caggccgccg	1440
gcaccgacac caccatcacc ctga	acgtgc tggcctggct	gtacgccgcc	gtgatcaacg	1500

qcqaccqctq gttcctgaac cgcttcacca ctaccctgaa cgacttcaac ctggtggcca 1560 1620 tgaagtacaa ctacgagccc ctgacccagg accacgtgga catcctgggc cccctgagcg cccagaccgg catcgccgtc ctggacatgt gcgccgccct gaaggagctg ctccagaacg 1680 qcatqaacqq ccqcaccatc ctgggcagca ccatcctgga ggacgagttc accccttcg 1740 acgtcgtgcg ccagtgcagc ggcgtgacct tccagtaagg atccatatat agggcccggg 1800 ttataattac ctcaggtcga cgtcccatgg ttttgtatag aatttacggc tagcgccgga 1860 tgcgacgccg gtcgcgtctt atccggcctt cctatatcag gctgtgttta agacgccgcc 1920 gcttcgccca aatccttatg ccggttcgac ggctggacaa aatactgttt atcttcccag 1980 cgcaggcagg ttaatgtacc accccagcag cagccggtat ccagcgcgta tataccttcc 2040 ggcgtacctt tgccctccag cgatgcccag tgaccaaagg cgatgctgta ttcttcagcg 2100 2160 acagggccag gaatcgcaaa ccacggtttc agtggggcag gggcctcttc cggcgattct 2220 tactagctag tatgcatagg tgctgaaata taaagtttgt gtttctaaaa cacacgtggt 2280 acgtacgata acgtacagtg tttttccctc cacttaaatc gaagggtagt gtcttggagc 2340 gcgcggagta aacatatatg gttcatatat gtccgtaggc acgtaaaaaa agcgagggat 2400 2460 aaaaaaaaa aaaaaaaaa agcttggcgt aatcatggtc atagctgttt cctgtgtgaa 2520 attgttatcc gctcacaatt ccacacaaca tacgagccgg aagcataaag tgtaaagcct 2580 ggggtgccta atgagtgagc taactcacat taattgcgtt gcgctcactg cccgctttcc 2640 agtcgggaaa cctgtcgtgc cagctgcatt aatgaatcgg ccaacgcgcg gggagaggcg 2700 gtttgcgtat tgggcgctct tccgcttcct cgctcactga ctcgctgcgc tcggtcgttc ggctgcggcg agcggtatca gctcactcaa aggcggtaat acggttatcc acagaatcag 2760 2820 gggataacgc aggaaagaac atgtgagcaa aaggccagca aaaggccagg aaccgtaaaa 2880 aggccgcgtt gctggcgttt ttccataggc tccgccccc tgacgagcat cacaaaaatc 2940 gacgeteaag teagaggtgg egaaaceega eaggaetata aagataceag gegttteeee 3000 ctggaagete cetegtgege tetectgtte egaceetgee gettacegga tacetgteeg 3060 cctttctccc ttcgggaagc gtggcgcttt ctcatagctc acgctgtagg tatctcagtt 3120 cggtgtaggt cgttcgctcc aagctgggct gtgtgcacga accccccgtt cagcccgacc 3180 gctgcgcctt atccggtaac tatcgtcttg agtccaaccc ggtaagacac gacttatcgc cactggcagc agccactggt aacaggatta gcagagcgag gtatgtaggc ggtgctacag 3240 agttcttgaa gtggtggcct aactacggct acactagaag gacagtattt ggtatctgcg 3300 3360 ctctgctgaa gccagttacc ttcggaaaaa gagttggtag ctcttgatcc ggcaaacaaa

3420 ccaccgctgg tagcggtggt tttttttgttt gcaagcagca gattacgcgc agaaaaaaag 3480 gateteaaga agateetttg atetttteta eggggtetga egeteagtgg aacgaaaact cacgttaagg gattttggtc atgagattat caaaaaggat cttcacctag atccttttaa 3540 attaaaaatg aagttttaaa tcaatctaaa gtatatatga gtaaacttgg tctgacagtt 3600 3660 accaatgett aatcagtgag geacetatet eagegatetg tetatttegt teatecatag 3720 ttgcctgact ccccgtcgtg tagataacta cgatacggga gggcttacca tctggcccca gtgctgcaat gataccgcga gacccacgct caccggctcc agatttatca gcaataaacc 3780 agccagccgg aagggccgag cgcagaagtg gtcctgcaac tttatccgcc tccatccagt 3840 ctattaattg ttgccgggaa gctagagtaa gtagttcgcc agttaatagt ttgcgcaacg 3900 ttgttgccat tgctacaggc atcgtggtgt cacgctcgtc gtttggtatg gcttcattca 3960 4020 gctccggttc ccaacgatca aggcgagtta catgatcccc catgttgtgc aaaaaagcgg ttagctcctt cggtcctccg atcgttgtca gaagtaagtt ggccgcagtg ttatcactca 4080 tggttatggc agcactgcat aattctctta ctgtcatgcc atccgtaaga tgcttttctg 4140 4200 tgactggtga gtactcaacc aagtcattct gagaatagtg tatgcggcga ccgagttgct cttgcccggc gtcaatacgg gataataccg cgccacatag cagaacttta aaagtgctca 4260 tcattggaaa acgttcttcg gggcgaaaac tctcaaggat cttaccgctg ttgagatcca 4320 gttcgatgta acccactcgt gcacccaact gatcttcagc atcttttact ttcaccagcg 4380 tttctgggtg agcaaaaaca ggaaggcaaa atgccgcaaa aaagggaata agggcgacac 4440 4500 ggaaatgttg aatactcata ctcttccttt ttcaatatta ttgaagcatt tatcagggtt 4560 attgtctcat gagcggatac atatttgaat gtatttagaa aaataaacaa ataggggttc 4620 cgcgcacatt tccccgaaaa gtgccacctg acgtctaaga aaccattatt atcatgacat 4680 taacctataa aaataggcgt atcacgaggc cctttcgtct cgcgcgtttc ggtgatgacg gtgaaaacct ctgacacatg cagctcccgg agacggtcac agcttgtctg taagcggatg 4740 4800 ccgggagcag acaagcccgt cagggcgcgt cagcgggtgt tggcgggtgt cggggctggc 4860 ttaactatgc ggcatcagag cagattgtac tgagagtgca ccatatcgac gctctccctt atgcgactcc tgcattagga agcagcccag tagtaggttg aggccgttga gcaccgccgc 4920 4980 cgcaaggaat ggtgcatgca aggagatggc gcccaacagt cccccggcca cggggcctgc 5040 caccatacce acgccgaaac aagcgctcat gagcccgaag tggcgagccc gatcttcccc 5100 atcggtgatg tcggcgatat aggcgccagc aaccgcacct gtggcgccgg tgatgccggc 5160 cacgatgcgt ccggcgtaga ggatctggct agcgatgacc ctgctgattg gttcgctgac catttccggg gtgcggaacg gcgttaccag aaactcagaa ggttcgtcca accaaaccga 5220 ctctgacggc agtttacgag agagatgata gggtctgctt cagtaagcca gatgctacac 5280

aattaggo	ctt gtacatatig tegitagaac geggetacaa ttaatacata acettatgta	5340
tcatacac	cat acg	5353
<211> 1 <212> 1	6 115 DNA Artificial	
<220> <223> E	Primer for cloning SARS protease gene	
	6 aac ggccgcacca tectgggcag caccatectg gaggacgagt teacceett	60
cgacgtcg	gtg cgccagtgca gcggcgtgac cttccagtaa ggatccacta gttct	115
<211> 3 <212> 1	7 35 DNA Artificial	
<220> <223> I	Primer for cloning SARS protease gene	
	7 agc tgctccagaa cggcatgaac ggccg	35
<211> 1 <212> 1	8 115 DNA Artificial	
<220> <223> I	Primer for cloning SARS protease gene	
	8 tac aactacgage coetgaceca ggaceaegtg gacateetgg geeecetgag	60
cgcccaga	acc ggcatcgccg teetggacat gtgcgccgcc ctgaaggagc tgctc	115
<211> 3 <212> 1	9 35 DNA Artificial	
<220> <223>	Primer for cloning SARS protease gene	
	9 tca acctggtggc catgaagtac aacta	35
<211> : <212> :	10 115 DNA Artificial	

<220> <223> Primer for cloning SARS protease gene	
<400> 10	
cggcaccgac accaccatca ccctgaacgt gctggcctgg ctgtacgccg ccgtgatca	aa 60
cggcgaccgc tggttcctga accgcttcac cactaccctg aacgacttca acctg	115
<210> 11	
<211> 35	
<212> DNA	
<213> Artificial	
<220>	
<223> Primer for cloning SARS protease gene	
<400> 11	
cgccagaccg cccaggccgc cggcaccgac accac	35
<210> 12	
<211> 99	
<212> DNA	
<213> Artificial	
<220>	
<223> Primer for cloning SARS protease gene	
<400> 12	
tgctacatgc accacatgga gctgcccacc ggcgtgcacg ccggcaccga cctggagg	gc 60
aagttotacg goocottogt ggacogooag acogoocag	99
<210> 13	
<211> 35 <212> DNA	
<213> Artificial	
<220> <223> Primer for cloning SARS protease gene	
<400> 13	0.5
actacgactg cgtaagette tgetacatge accae	35
<210> 14	
<211> 115	
<212> DNA	
<213> Artificial	
<220>	
<223> Primer for cloning SARS protease gene	
<400> 14	ga 60
ccagccacag gccgttcagg gtagtggtgc cgcaggtgac ctgcaccatg cagccctc	_
ccttgccgct ggggaaggcc atcttgcgga agccgctcat ctcgaggggg ggccc	115

<210> 15

```
<211> 35
<212> DNA
<213> Artificial
<220>
<223> Primer for cloning SARS protease gene
<400> 15
                                                                     35
ggggcagtag acggtgtcat ccagccacag gccgt
<210> 16
<211> 115
<212>
      DNA
<213> Artificial
<220>
<223> Primer for cloning SARS protease gene
<400> 16
cgttgccggc ctgcaccagg aaggagtggt tgctcttgcg gatgagcagg tcctcgtagt
                                                                    60
tggggttcag catgtcctcg gcggtgcaga tcacgtggcg ggggcagtag acggt
                                                                    115
<210> 17
<211>
       35
<212> DNA
<213> Artificial
<220>
<223> Primer for cloning SARS protease gene
<400> 17
                                                                     35
gccgatcacg cgcagctgga cgttgccggc ctgca
<210> 18
<211> 115
<212> DNA
<213> Artificial
<220>
<223> Primer for cloning SARS protease gene
<400> 18
tgaaggtctg gccgggctgg atgcgcacga acttgtactt gggggtcttg gggttgctgg
                                                                    60
tgtccacctt caggcggagc aggcagttct gcatgctgtg gccgatcacg cgcag
                                                                    115
<210> 19
<211> 35
<212> DNA
<213> Artificial
<220>
<223> Primer for cloning SARS protease gene
<400> 19
                                                                      35
gttgtagcag gccagcacgc tgaaggtctg gccgg
```

```
<210> 20
<211> 115
<212> DNA
<213> Artificial
<220>
<223> Primer for cloning SARS protease gene
<400> 20
cgatgttgaa gcccacgctg ccgcagctcc cgttcaggaa gctgcccttg atggtgtgt
                                                                    60
tggggcgcat ggcgcactgg tacacgccgc tggggctgcc gttgtagcag gccag
                                                                    115
<210> 21
<211> 37
<212> DNA
<213> Artificial
<220>
<223> Primer for cloning SARS protease gene
<400> 21
                                                                     37
gagaagctta cgcagtcgta gtcgatgttg aagccca
<210> 22
<211> 21
<212> DNA
<213> Artificial
<220>
<223> Spu primer
<400> 22
gcgtagcatt taggtgacac t
                                                                     21
<210> 23
<211> 20
<212> DNA
<213> Artificial
<220>
<223> AODA2303 primer
<400> 23
                                                                     20
gtcagacccc gtagaaaaga
<210> 24
<211> 29
<212> DNA
<213> Artificial
<220>
<223> GFP-RS-GUS (E01-XhoI-A1)
<400> 24
                                                                      29
gagactcgag tgatatcttg gtgatgtag
<210> 25
```

```
<211> 69
<212> DNA
<213> Artificial
<220>
<223> GFP-RS-GUS (GUS-RS-S1)
<400> 25
gagactgcag agcggcttcc gcaagatggc cttccccagc ggcaaggtga tgttacgtcc
                                                                    60
tgtagaaac
                                                                     69
<210> 26
<211> 30
<212> DNA
<213> Artificial
<220>
<223> GFP-RS-GUS (GFP-XhoI-S1)
<400> 26
gagactcgag aatggtgagc aagggcgagg
                                                                     30
<210> 27
<211> 59
<212> DNA
<213> Artificial
<220>
<223> GFP-RS-GUS (GFP-RS-A1)
<400> 27
gagactgcag cacggcagag gtgatgctgg tctggggggg cttgtacagc tcgtccatg
                                                                    59
<210> 28
<211> 30
<212> DNA
<213> Artificial
<220>
<223> GFP-RS-SA3CL pro (RS-3CL-S1)
<400> 28
                                                                     30
gagactgcag agcggcttcc gcaagatggc
<210> 29
<211> 17
<212> DNA
<213> Artificial
<220>
<223> GFP-RS-SA3CL pro (M13)
<400> 29
gtaaaacgac ggccagt
                                                                     17
<210> 30
```

```
<211> 23
<212> DNA
<213> Artificial
<220>
<223> GST-RS-SA3CL pro (GST-RS-sen)
<400> 30
                                                                           23
gagactcgag atggaatccc cta
<210> 31
<211> 59
<212> DNA
<213> Artificial
<220>
<223> GST-RS-SA3CL pro (GST-RS-anti)
gagactgcag cacggcagag gtgatgctgg tctgcggtgg gtccgatttt ggaggatgg
                                                                      59
<210> 32
<211> 306
<212> PRT
<213> SA3CL pro
<400> 32
Ser Gly Phe Arg Lys Met Ala Phe Pro Ser Gly Lys Val Glu Gly Cys
Met Val Gln Val Thr Cys Gly Thr Thr Thr Leu Asn Gly Leu Trp Leu
Asp Asp Thr Val Tyr Cys Pro Arg His Val Ile Cys Thr Ala Glu Asp
                              40
Met Leu Asn Pro Asn Tyr Glu Asp Leu Leu Ile Arg Lys Ser Asn His
                         55
Ser Phe Leu Val Gln Ala Gly Asn Val Gln Leu Arg Val Ile Gly His
                     70
                                           75
Ser Met Gln Asn Cys Leu Leu Arg Leu Lys Val Asp Thr Ser Asn Pro
                 85
                                       90
Lys Thr Pro Lys Tyr Lys Phe Val Arg Ile Gln Pro Gly Gln Thr Phe
             100
Ser Val Leu Ala Cys Tyr Asn Gly Ser Pro Ser Gly Val Tyr Gln Cys
                                                   125
         115
                              120
```

Ala Met Arq Pro Asn His Thr Ile Lys Gly Ser Phe Leu Asn Gly Ser

130 135 140

Cys Gly Ser Val Gly Phe Asn Ile Asp Tyr Asp Cys Val Ser Phe Cys 145 150 155 160

- Tyr Met His His Met Glu Leu Pro Thr Gly Val His Ala Gly Thr Asp 165 170 175
- Leu Glu Gly Lys Phe Tyr Gly Pro Phe Val Asp Arg Gln Thr Ala Gln
 180 185 190
- Ala Ala Gly Thr Asp Thr Thr Ile Thr Leu Asn Val Leu Ala Trp Leu 195 200 205
- Tyr Ala Ala Val Ile Asn Gly Asp Arg Trp Phe Leu Asn Arg Phe Thr 210 215 220
- Thr Thr Leu Asn Asp Phe Asn Leu Val Ala Met Lys Tyr Asn Tyr Glu 225 230 235 240
- Pro Leu Thr Gln Asp His Val Asp Ile Leu Gly Pro Leu Ser Ala Gln 245 250 255
- Thr Gly Ile Ala Val Leu Asp Met Cys Ala Ala Leu Lys Glu Leu Leu 260 265 270
- Gln Asn Gly Met Asn Gly Arg Thr Ile Leu Gly Ser Thr Ile Leu Glu 275 280 285
- Asp Glu Phe Thr Pro Phe Asp Val Val Arg Gln Cys Ser Gly Val Thr 290 295 300

Phe Gln 305

This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

☐ BLACK BORDERS
☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
☐ FADED TEXT OR DRAWING
BLURRED OR ILLEGIBLE TEXT OR DRAWING
☐ SKEWED/SLANTED IMAGES
☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
☐ GRAY SCALE DOCUMENTS
LINES OR MARKS ON ORIGINAL DOCUMENT
REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
Потивр.

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.